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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,695	11/24/2003	Peter Gmeiner	71213	7862
23872 7590 02/27/2007 MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			EXAMINER MARC, MCDIEUNEL	
			ART UNIT	PAPER NUMBER
			3661	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/723,695

**Applicant(s)**

GMEINER, PETER

**Examiner**

McDieunel Marc

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8, 10, 13-22 and 24 is/are rejected.  
7) ☒ Claim(s) 9, 11, 12 and 23 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-24 are presented for examination.
2. The abstract of the disclosure is objected to because of the word "invention" in line 11. Correction is required. See MPEP § 608.01(b).

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Regarding claim 1 is rejected, due to the phrase "such as" in line 2, which renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, 14-22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (U.S. Pat. No. 6,163,124).

As per claim 1, Ito et al. teaches a robot having a system and an associated method for machining workpieces by means of a multiaxial manipulator, [*such as*] of an industrial robot (see fig. 1,) note that Ito's *et al.* reference knows it useless to mention multiaxial manipulator since robot "RB" contains multiaxial manipulator, besides RB is a "6-axes robot", with a tool moved proportionally by a control unit of the manipulator (see fig. 3, element 30) and which is able to perform characteristic movements with several degrees of freedom (see col. 6, lines 63 – to – col. lines -8), note that we obtain several degree of freedom by letting the host CPU 31 forms motion command in respect of each axis of the robot RB, wherein the degrees of freedom of the tool are evaluated together with the degrees of freedom of axes of the manipulator in real time (see col. 16, lines 51-55), note that step H4 equates real time function, for moving a tool tip (TCP) in accordance with a predetermined machining geometry (see fig. 3, element 10 and col. 6, lines 41-45) and for determining a movement of the manipulator (see col. 6, lines 63 – to – col. lines -8, as noted above and col. 7, lines 33-42), note that motion planning stands for predetermined movement of the manipulator; and wherein the tool and a tool tip (TCP) are movement-controllable by the manipulator control unit during the machining of a workpiece (see abstract and fig. 11).

As per claims 2 and 3, Ito et al. teaches a robot having a system and an associated method, wherein the tool tip (TCP) is at least temporarily moved along a single, continuous machining geometry (machining path); and wherein the tool tip is moved at least temporarily along a portionwise continuous machining geometry (step function) (see col. 3, lines 51-61).

As per claims 4 and 5, Ito et al. teaches a robot, wherein evaluation takes place through the control unit of the manipulator (see fig. 3, element 30 and col. 18, lines 52-63); and wherein at least coordinates of the machining geometry are entered into a control unit of the manipulator for a movement control of the tool tip (see fig. 3, element 37).

As per claims 6 and 21, Ito et al. teaches a robot, wherein the machining geometry is discretized to a sequence of discrete coordinate values with an identical time interval (cycle time) between successive values; and for a workpiece machining geometry (see figs. 12 and 13, wherein t1 and t2 provide identical time interval and successive values being taken as speed and overriding values).

As per claims 7 and 15, Ito et al. teaches a robot a system and an associated method, wherein the coordinate values of the machining geometry, prior to machining, are stored in a memory unit associated with the control unit; and wherein a predetermined movement path of the manipulator, prior to machining, is stored in the memory unit associated with the control unit (see fig. 3, element 37, wherein the playback capacity itself tells you data are being stored for such step).

As per claims 8, 13 and 22, Ito et al. teaches a robot a system and an associated method, wherein with the coordinates of the machining geometry are associated correction values

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corresponding to maximum amplitudes of the characteristic movements of the tool in the degrees of freedom thereof; and wherein the cycle time is at least periodically adapted to at least one parameter of the movements (see col. 1, lines 48-61, wherein normal path being considered as correction of values made by test run instruction positions and temporary stop provides periodic movements).

As per claim 14, Ito et al. teaches a robot, wherein the movement of the tool tip takes place with a substantially constant speed (see col. 1, lines 48-61, wherein normal path being considered also as constant speed for the tool).

As per claim 16, Ito et al. teaches a robot, wherein during machining, the workpiece is moved by the manipulator (see abstract and figs. 3, 11).

As per claim 17, Ito et al. teaches a robot, wherein during machining, the tool is moved by the manipulator (see abstract and figs. 3, 11).

As per claim 19, Ito et al. teaches a robot, wherein during machining, the workpiece is connected to and movable by the manipulator (see abstract and figs. 3, 11).

As per claim 20, Ito et al. teaches a robot, wherein during machining, the tool is connected to and movable by the manipulator (see abstract and figs. 3, 11).

***Allowable Subject Matter***

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7. Claims 9-12 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or fairly suggest with respect to claim 9, a method for machining workpieces, wherein instantaneous coordinate difference between the machining geometry and a position and orientation (pose) of the tool tip does not exceed the amplitude of the corresponding characteristic movements of the tool; with respect to claim 10, a method for machining workpieces wherein the manipulator movement path is adapted to be as short as possible and/or so as to be component-correct; with respect to claim 23, a device for machining workpieces wherein there are determination means for the dynamic determination of a relative pose between the tool tip (TCP) and a sum of the coordinate values of the machining geometry and wherein the associated deviations and signals generated in the determination means can be transferred to the manipulator and the tool for coordinated movement control purposes in combination with the other elements and features of the claimed invention.


### *Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

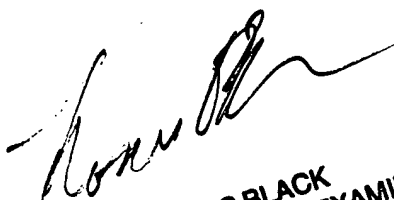
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
McDieunel Marc  
Examiner  
Art Unit 3661

Tuesday, February 06, 2007  
MM/

  
THOMAS BLACK  
SUPERVISORY PATENT EXAMINER